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LIST OF SYMBOLS

g_{mn}	The gray level of each pixel at the position (m,n)
μ_{mn}	The degree of brightness of each pixel
$\hat{\mu}_{mn}$	Heuristic Membership Function
α	The probability increase coefficient
β	The probability reduction coefficient

LIST OF ABBREVIATIONS

CLA	Cellular Learning Automata
CA	Cellular Automata
LA	Learning Automata
GA	Genetic Algorithm
NN	Neural Networks
FIS	Fuzzy Image Systems
OCLA	Open Cellular Learning Automata
ACLA	Asynchronous Cellular Learning Automata
SOFM	Self-Organization of Kohonen Feature Map
ACO	Ant Colony Optimization